Page 1 of 3

EXHIBIT

B
B
B
B

PubMed

Entrez

BLAST

OMIM

Taxonomy

Structure

BLAST 2 SEQUENCES RESULTS VERSION BLASTP 2.2.5 [Nov-16-2002]

Matrix BLOSUM62 gap open: 11 gap extension: 1	- description
x_dropoff: 50 expect: 10.000 wordsize: 3 Filter	Align

Sequence 1 lcl|seq_1 **Length** 862 (1 .. 862)

Sequence 2 lcl|seq_2 **Length** 859 (1 .. 859)



NOTE: The statistics (bitscore and expect value) is calculated based on the size of nr database

Score = 1202 bits (3110), Expect = 0.0
Identities = 637/869 (73%), Positives = 704/869 (80%), Gaps = 17/869 (1%)

(and the		
Query:	1	MERAESSSTEPAKAIKPIDRKSVHQICSGQVVLSLSTAVKELVENSLDAGATNIDLKLKD ME+ E STE AKAIKPID KSVHQICSGQV+LSLSTAVKEL+ENS+DAGAT IDL+LKD	60
Sbjct:	1	MEQTEGVSTECAKAIKPIDGKSVHQICSGQVILSLSTAVKELIENSVDAGATTIDLRLKD	60
Query:	61	YGVDLIEVSDNGCGVEEENFEGLTLKHHTSKIQEFADLTQVETFGFRGEALSSLCALSDV	120
Sbjct:	61	YGVDLIEVSDNGCGVEEENFEGL LKHHTSKIQEFADLTQVETFGFRGEALSSLCALSDV YGVDLIEVSDNGCGVEEENFEGLALKHHTSKIQEFADLTQVETFGFRGEALSSLCALSDV	120
Query:	121	TISTCHASAKVGTRLMFDHNGKIIQKTPYPRPRGTTVSVQQLFSTLPVRHKEFQRNIKKE	180
Sbjct:	121	TISTCH SA VGTRL+FDHNGKI QKTPYPRP+GTTVSVQ LF TLPVR+KEFQRNIKKE TISTCHGSASVGTRLVFDHNGKITQKTPYPRPKGTTVSVQHLFYTLPVRYKEFQRNIKKE	180
Query:	181	YAKMVQVLHAYCIISAGIRVSCTNQLGQGKRQPVVCTGGSPSIKENIGSVFGQKQLQSLI	240
Sbjct:	181	Y+KMVQVL AYCIISAG+RVSCTNQLGQGKR VVCT G+ +KENIGSVFGQKQLQSLI YSKMVQVLQAYCIISAGVRVSCTNQLGQGKRHAVVCTSGTSGMKENIGSVFGQKQLQSLI	240
Query:	241	PFVQLPPSDSVCEEYGLSCSDALHNLFYISGFISQCTHGVGRSSTDRQFFFINRRPCD	298
Sbjct:	241	PFVQLPPSD+VCEEYGLS S H F + + F S T G T F R P PFVQLPPSDAVCEEYGLSTSGR-HKTFSTFRASFHSARTAPGGVQQTG-SFSSSIRGPVT	298
Query:	299	PAKVCRLVNEVYHMYNRHQYPFVVLNISVDSECVDINVTPDKRQILLQEEKLLLAVLKTS	358
Sbjct:	299	+ L YHMYNRHQYPFVVLN+SVDSECVDINVTPDKRQILLQEEKLLLAVLKTS QQRSLSLSMRFYHMYNRHQYPFVVLNVSVDSECVDINVTPDKRQILLQEEKLLLAVLKTS	358
Query:	359	LIGMFDSDVNKLNVSQQPLLDVEGNLIKMHAADLEKPMVEKQDQSPSLR-TGEEKKDVSI LIGMFDSD NKLNV+QQPLLDVEGNL+K+H A+LEKP+ KQD SPSL+ T +EK+ SI	417

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Sbjct: 359 LIGMFDSDANKLNVNQQPLLDVEGNLVKLHTAELEKPVPGKQDNSPSLKSTADEKRVASI 418
Query: 418 SRLREAFSLRHTTENKPHSPKTPEPRRSPLGQKRGMLSSSTSGAISDKGVLRPQKEAVSS 477
          SRLREAFSL T E K P+T E RS +KRG+LSS S IS +G+
Sbjct: 419 SRLREAFSLHPTKEIKSRGPETAELTRSFPSEKRGVLSSYPSDVISYRGLRGSQDKLVSP 478
Ouery: 478 SHGPSDPTDRAEVEKDSGHGSTSVDSEG-FSIPDTGSHCSSEYAASSPGDRGSQEHVDSQ 536
          + P D DR ++EKDSG STS SE FS P+ S SS+Y SS DR SQE ++
Sbjct: 479 TDSPGDCMDREKIEKDSGLSSTSAGSEEEFSTPEVASSFSSDYNVSSLEDRPSQETINCG 538
Query: 537 E---KAPETDDSFSDVDCHSNQEDTGCKFRVLPQPTNLATPNTKRFKKEEILSSSDICQK 593
              + PT S
                                ED G + + LP L+ N KRFK EE S+ +I Q+
Sbjct: 539 DLDCRPPGTGQSLKP-----EDHGYQCKALPL-ARLSPTNAKRFKTEERPSNVNISQR 590
Query: 594 LVNTQDMSASQVDVAVKINKKVVPLDFSMSSLAKRIKQLHHEAQQSEGEQNYRKFRAKIC 653
              Q SA++VDVA+K+NK++V L+FS+SSLAKR+KQL H Q++ E +YRKFRAKIC
Sbjct: 591 LPGPQSTSAAEVDVAIKMNKRIVLLEFSLSSLAKRMKQLQHLKAQNKHELSYRKFRAKIC 650
Query: 654 PGENQAAEDELRKEISKTMFAEMEIIGQFNLGFIITKLNEDIFIVDQHATDEKYNFEMLQ 713
          PGENQAAEDELRKEISK+MFAEMEI+GQFNLGFI+TKL ED+F+VDQHA DEKYNFEMLQ
Sbjct: 651 PGENOAAEDELRKEISKSMFAEMEILGOFNLGFIVTKLKEDLFLVDOHAADEKYNFEMLO 710
Query: 714 QHTVLQGQRLIAPQTLNLTAVNEAVLIENLEIFRKNGFDFVIDENAPVTERAKLISLPTS 773
          QHTVLQ QRLI PQTLNLTAVNEAVLIENLEIFRKNGFDFVIDE+APVTERAKLISLPTS
Sbjct: 711 QHTVLQAQRLITPQTLNLTAVNEAVLIENLEIFRKNGFDFVIDEDAPVTERAKLISLPTS 770
Query: 774 KNWTFGPQDVDELIFMLSDSPGVMCRPSRVKQMFASRACRKSVMIGTALNTSEMKKLITH 833
          KNWTFGPQD+DELIFMLSDSPGVMCRPSRV+QMFASRACRKSVMIGTALN SEMKKLITH
Sbjct: 771 KNWTFGPQDIDELIFMLSDSPGVMCRPSRVRQMFASRACRKSVMIGTALNASEMKKLITH 830
Query: 834 MGEMDHPWNCPHGRPTMRHIANLGVISQN 862
          MGEMDHPWNCPHGRPTMRH+ANL VISQN
Sbjct: 831 MGEMDHPWNCPHGRPTMRHVANLDVISQN 859
                                                     0.21 total secs.
CPU time: 0.17 user secs. 0.04 sys. secs
Lambda
          K
          0.131 0.371
   0.315
Gapped
Lambda
          K
   0.267
          0.0410
                    0.140
Matrix: BLOSUM62
Gap Penalties: Existence: 11, Extension: 1
Number of Hits to DB: 6158
Number of Sequences: 0
Number of extensions: 502
Number of successful extensions: 5
Number of sequences better than 10.0: 1
Number of HSP's better than 10.0 without gapping: 1
Number of HSP's successfully gapped in prelim test: 0
Number of HSP's that attempted gapping in prelim test: 0
Number of HSP's gapped (non-prelim): 1
length of query: 859
length of database: 461,760,005
effective HSP length: 136
effective length of query: 723
effective length of database: 461,759,869
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effective search space: 333852385287
effective search space used: 333852385287
T: 9
A: 40
X1: 16 (7.3 bits)
X2: 129 (49.7 bits)
X3: 129 (49.7 bits)
S1: 41 (21.6 bits)
S2: 79 (35.0 bits)